

Remarks

Claims 26-41 were pending at the time of the outstanding Office Action. The Examiner has stated that "[c]laims 1-25 are rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over Jones #4,355,511." Because claims 1-25 were canceled in the previous office action, Applicants assume that Examiner intended to reject claims 26-41 which were properly listed on the cover page. Claim 26 has been canceled herein and presented as new claim 42. Claims 27 and 27 (redundant numbering) have been canceled and presented as new claims 43-44 to eliminate any ambiguity. Claims 28-29 have been amended to depend from the new claims. No new issues are raised by this amendment.

Claims 40-41 have been canceled herein.

Applicants respectfully traverse the above rejection.

1. Claims 26-41 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Jones U.S. Patent No. U.S. Patent No. 4,355,511

Claims 26-41 under 35 U.S.C. §102(b) are rejected as anticipated by Jones, U.S. Patent No. 4,355,511 (Jones).

A wave power plant for placement upon a body of water for producing energy from waves, the power plant comprising:

a floating structure having a deck, at least one vertically extending column for supporting the deck, and at least one dampener affixed to the at least one column and oriented below the level of the water; and

at least one floating body for vertical movement relative to the floating structure, the at least one floating body having a collective floating body plane area at water level greater than a collective floating structure plane area at water level,

wherein the at least one dampener has a height dimension and a width dimension, with the width dimension being greater than the height dimension for stabilizing the floating structure relative to wave motion.

New claim 42 requires, in part, "at least one dampener affixed to the at least one column and oriented below the level of the water." Jones does not disclose this limitation. In contrast, Jones teaches a power plant floating structure with an anchoring system for vertical stability (Figs. 2 and 6). In Figure 27 of Jones, rather than using an anchor for vertical stability, floats 704 and 706 are spaced apart approximately one wave length so that the floating structure and floating bodies move up and down out of phase. Further, claim 42 requires wherein the at least one dampener has a height dimension and a width dimension, with the width dimension being greater than the height dimension for stabilizing the floating structure relative to wave motion." Jones fails to disclose this limitation. In contrast, Jones teaches pontoons 212, 214 which appear to have a height substantially greater than their width. (See Figs. 12 and 13). In Jones figure 27, floats 704 and 706 are not submerged as claimed. The pontoons taught by Jones are shaped to shear through the water with minimum resistance. Consequently, the factors that determine how much the floating structure of Jones moves with waves are the weight of the structure and the water plane area (the cross-section of the floats at the plane of the water level). The invention of claim 42 teaches a dampener located below the surface of the water such that the movement of the structure is less affected by wave movement.

Moreover, in Jones, the water plane area of the pontoon of the floating structure is larger than the combined water plane area of the floating bodies. This can be derived from Figure 12 by comparing the cross-section of the two pontoons with the cross-section of the three floating bodies. In Figure 12, the pontoons have been depicted with rupture lines which indicate that the pontoons are even larger than shown. It is thus impossible to know exactly how much larger the cross-section of the pontoons are than the cross-section of the floating bodies, but it is clearly larger. In pertinent part, claim 42 requires "the at least one floating body having a collective floating body water plane area greater than a collective floating structure water plane area." Accordingly, Jones does not teach all the requirements of claim 42.

Thus, claim 42 is nonobvious over Jones.

Claims 27, 27 (second instance) and 40-41 are canceled.

New claims 43, 44, and amended claims 28-29 depend from claim 42. Accordingly, they are not anticipated by Jones for at least the reasons stated above.

Claim 43 requires, in part, "in that the diameter of the columns is substantially equal to the diameter of the floating body or bodies." Jones fails to disclose this limitation. With reference to Jones' Figure 21b, a column is disclosed as element 384. Also in Figure 21b, a floating body 340 is disclosed. The diameter of the floating body 340 is substantially greater than the diameter of the column 384. Thus, Jones fails to disclose all of the elements of Applicants' claim 42. Accordingly, claim 43 is not anticipated by Jones.

New claim 44 requires, in part, "characterized in that the dampener is adapted to trap water when the structure is moving." Jones fails to disclose these elements of new claim 44. Jones appears to disclose a pair of pontoons elements 212, 214 which are not connected to any substantially vertical columns. Instead, with reference to Jones' Figure 12, pontoon 212 is connected to substantially horizontal truss members 222, 220, and 218. Additionally, the pontoons 212, 214 disclosed by Jones do not appear "adapted to trap water when the structure is moving due to wave induction." Accordingly, Jones fails to disclose all of the required elements of new claim 44.

Claims 28-29 each depend from new claim 44 and are not anticipated by Jones for at least the reasons stated above.

Amended claim 28 requires, in part, "characterized in that the columns are open at their lower end so that water may flow into the column and out of the wave dampener when the structure is moving downward relative to the water." With reference to Jones' Figure 21b, the columns 384 disclosed by Jones extend towards the platform but do not connect or support any wave dampeners or pontoons. Further, Jones does not disclose wherein the columns are open at their lower end so that water may flow into the columns. Accordingly, the columns of Jones cannot allow water into the columns. Further, because the columns of Jones are not structurally supporting or connected with the pontoons of Jones, water cannot flow into the column and out of the wave dampener when the structure is moving.

Amended claim 29 requires, in part, "in that the wave dampeners at their upper and/or lower ends have a curvature that redirects water." The pontoons disclosed by Jones lack such curvature. (See Fig. 13). Accordingly, Jones does not contain all of the required elements of amended claim 29.

Claim 30 requires, in part, "the floating bodies comprise means of increasing or reducing the amount of water in the floating bodies, the means comprise an opening at the lower end of the floating body and the means also comprise a closable opening at the upper end of the floating body." Jones fails to disclose this limitation. Jones discloses floating bodies, however, the floating bodies are not designed to be partially filled with water per the limitations of claim 30. Jones does not appear to disclose an opening at the lower end of the floating body or a closable opening at the upper end of the floating body. Jones does not disclose all of the limitations of Applicants' claim 30. Accordingly, Jones does not anticipate claim 30.

Claims 31-38 depend from claim 30. Accordingly, claims 31-38 are not anticipated by Jones for at least the reasons stated above.

Claim 32 requires, in part, "the means also comprise an adjustable extension of the floating body, which extension is arranged to receive water." Jones fails to disclose this limitation. As discussed above, the floating bodies of Jones are not adapted to receive water. Further, the floating bodies of Jones do not appear to disclose an adjustable extension which is arranged to receive water. Thus, Jones does not disclose all the limitations of claim 32. Jones cannot anticipate claim 32.

Claim 35 requires, in part, "that the truss work comprises pipes made from a lightweight material, preferably plastic." Jones fails to disclose this limitation. Jones does not disclose that the trusses are made from a plastic. Thus, Jones does not disclose all the limitations of claim 35.

Claim 36 requires "characterized in that the floating body has the shape of a cylinder with rounded ends." Jones does not disclose this limitation. Instead, Jones discloses

"that the lowered disposed buoyancy portion 12 of float 10 is not hydraulically streamlined to appoint what is provided to have a flat bottom portion." (Column 6, lines 31-34.) Accordingly, Jones does not disclose the limitations of claim 36.

Claim 37 states "characterized in that the floating structure comprises a base constructed with adjustable parts in order to build up the height of passing waves, so as to allow the energy to be transferred to surface waves." Jones does not disclose this limitation. Jones does not appear to disclose a base constructed with adjustable parts. Further, Jones does not disclose a structure to build up the height of passing waves to transfer energy to surface waves. Thus, Jones does not anticipate the elements of claim 37.

Claim 38 includes "the draught of the floating structure can be raised or lowered through ballasting of the structure." Jones fails to disclose this limitation. In contrast, with reference to Figure 17, Jones teaches an anchoring system for the structure. (Column 20, lines 15-18.) Thus, Jones does not anticipate claim 38.

Claim 39 includes in part "that the floating body or bodies is/are adapted to float in the water surface and to be partially filled with water." Jones fails to disclose this limitation. Jones does not disclose floating bodies adapted to be partially filled with water. Further, claim 39 requires that the floating body or bodies comprise an opening at the lower part of the body and a closable opening at the upper part of the body. Jones fails to disclose this limitation. Again, Jones does not disclose that the floating bodies are adapted to be partially filled with water. Jones does not present floating bodies having openings for receiving or expelling water. Jones appears to present floating bodies which are completely sealed. Further, claim 39 states "the opening at the upper part is adapted to be opened to let water in or out through the opening at the lower part, to increase or reduce the amount of water in the floating body or bodies." Once again, Jones does not disclose floating bodies adapted to receive or expel water. The floating bodies in Jones do not have openings at the upper or at the lower portion. Jones does not disclose all the limitations of claim 39.

2. ***Claims 26-41 stand rejected under 35 U.S.C. § 103 as
being anticipated by Jones U.S. Patent No. 4,355,511***

The Examiner rejected claims 26-41 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,355,511 (Jones). Claims 26, 27 and 27 (second instance), and 40-41 are canceled.

Regarding claims 28-39 and 42-44, Jones fails to disclose all of the elements of the claims as described above. Further, Jones does not teach modifying its disclosures or provide any reason to modify its disclosures.

To establish a *prima facie* obviousness rejection, all of the claimed features must be taught or suggested by the prior art. Moreover, “there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *KSR Int’l v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007) (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)). The Examiner has failed to establish a *prima facie* case of obviousness for the claims because the reference fails to teach or suggest all of the claim limitations. Thus, claims 28-39, and 42-44 are non-obvious over Jones.

Reconsideration and reexamination of the application is respectfully requested. Applicants have made a genuine effort to respond to each of the Examiner’s objections and rejections in advancing the prosecution of this case. Applicants believe that all formal and substantive requirements for patentability have been met and that this case is in condition for allowance, which action is respectfully requested. If any additional issues need to be resolved, the Examiner is requested to telephone the undersigned at his convenience.

The Petition fee of \$130.00 is being charged to Deposit Account No. 02-3978 via electronic authorization submitted concurrently herewith. The Commissioner is hereby authorized to charge any additional fees or credit any overpayments as a result of the filing of this paper to Deposit Account No. 02-3978.

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Respectfully submitted,

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